

### REMARKS

The Examiner is thanked for the performance of a thorough search.

As a preliminary administrative matter, the Applicant wishes to call to the Examiner's attention that U.S. Patent Application Publication No. 2002/0049815 of *Dattatri*, which was cited and relied upon in the Office Action, is not listed on form PTO-892, Notice of References Cited, nor was a copy of *Dattatri* provided with the Office Action. However, the Applicant was able to determine the correct publication number for *Dattatri* and then to obtain a copy via the U.S. PTO web site. The Applicant also was able to verify via the U.S. PTO PAIR system that *Dattatri* claimed the benefit of provisional application 60/199,994 filed on April 14, 2000.

### STATUS OF CLAIMS

Claims 1, 2, 5-7, 10-12, 15, 18, and 21 have been amended.

Claims 25-35 have been added.

No claims have been cancelled or withdrawn.

Claims 1-35 are currently pending in the application.

### SUMMARY OF THE REJECTIONS

Claims 1, 4, 6, 9 and 11 have been rejected under 35 U.S.C. § 102(e) as allegedly anticipated by U.S. Patent Number 6,459,682 issued to Ellesson et al. ("*Ellesson*").

Claims 2, 5, 7, 12, 14-15, 17 and 21 have been rejected under 35 U.S.C. § 103(a) as allegedly unpatentable over *Ellesson* in view of U.S. Patent Number 6,701,342 issued to Bartz et al. ("*Bartz*").

Claims 3 and 8 have been rejected under 35 U.S.C. § 103(a) as allegedly unpatentable over *Ellesson* in view of U.S. Patent Application Publication No. 2002/0049815 of *Dattatri* et al. ("*Dattatri*").

Claim 10 has been rejected under 35 U.S.C. § 103(a) as allegedly unpatentable over *Ellesson* in view of U.S. Patent Number 6,466,984 issued to Naveh et al. ("*Naveh*").

Claims 13 and 16 have been rejected under 35 U.S.C. § 103(a) as allegedly unpatentable over *Ellesson* in view of *Bartz* and in further view of *Dattatri*.

Claims 18 and 20 have been rejected under 35 U.S.C. § 103(a) as allegedly unpatentable over *Ellesson* in view of *Bartz* and in further view of *Naveh*.

Claim 19 has been rejected under 35 U.S.C. § 103(a) as allegedly unpatentable over *Ellesson*, in view of *Bartz*, in further view of *Naveh* and in further view of *Dattatri*.

Claims 22 and 23 have been rejected under 35 U.S.C. § 103(a) as allegedly unpatentable over *Bartz* in view of U.S. Patent Number 6,701,345 issued to Carley et al. (“*Carley*”).

Claim 24 has been rejected under 35 U.S.C. § 103(a) as allegedly unpatentable over *Ellesson* in view of U.S. Patent Number 5,893,905 issued to Main et al. (“*Main*”).

The rejections are respectfully traversed.

#### A. CLAIM 1

##### (1) INTRODUCTION TO CLAIM 1

Claim 1 features:

“A method for monitoring a service level agreement, wherein the service level agreement defines for a particular network a level of service that has been offered to a customer by a service provider, the method comprising the computer-implemented steps of:  
creating a *schema* that provides a set of rules for defining service level agreements;  
receiving information defining the service level agreement, wherein said information defines one or more tests for monitoring the level of service that has been offered to the customer; and  
verifying that the information defining the service level agreement conforms to the set of rules in said *schema*.” (Emphasis added.)

Thus, the approach for monitoring a service level agreement of Claim 1 features “receiving information defining the service level agreement” and “wherein said information defines one or more tests for monitoring the level of service.” Note that in Claim 1, the information received defines both the service level agreement (SLA) and one or more tests for monitoring the level of service. For example, in one embodiment described in the Application, “a set of standardized template definitions are provided that define for an

SLA, the type of information that is to be collected, how often the information is to be collected and what constitutes a violation of the contract...the standardized templates define a set of metric tests that a service provider has approved.” (Application, page 12, lines 3-11.) By having the information defining the SLA also define the “one or more tests for monitoring the level of service,” the SLA monitoring approach of Claim 1 addresses the need for the customer to be able to “consistently generate reliable test results for which a Service Provider concedes are representative of the quality of service that is being provided...” (Application, page 5, lines 6-8.)

Furthermore, Claim 1 features “creating a *schema* that provides a set of rules for defining service level agreements” and “verifying that the information defining the service level agreement conforms to the set of rules in said *schema*.” For example, in one embodiment described in the application, use is made of “one or more Data Type Definitions (DTDs) that include a set of rules which define the tags that can be included within a document, for example an XML document, and how the tags may be nested with each other (XML schema). Moreover, the one or more DTDs specify the set of required and optional elements (and their attributes) and the ways in which they may be combined within a document.” (Application, page 11, line 20 through page 12, line 2.) Thus, the DTDs used with XML documents are examples of the schema used in the approach of Claim 1, and the DTDs can be used to verify that “information defining said particular service level agreement conforms to the set of rules in said schema,” or in other words, that information defining an SLA conform to the DTDs.

## (2) DISCUSSION OF *ELLESSON*

In contrast to the approach of Claim 1, *Ellesson* discloses a “method for controlling packet traffic in an IP network of originating, receiving and intermediate nodes to meet performance objectives established by service level agreements.” (Abstract.) Specifically, *Ellesson* explains that “traffic statistics and performance data such as delay and loss rates relating to traffic flows are collected at intermediate nodes. A central server processing the collected data to determines rates for different priorities of traffic. A static directory node is used to look up inter-node connections and determine initial traffic classes corresponding to

those connections. The rates are combined with the initial traffic classes to define codes for encoding the headers of packets to determine their network priority.” (Col. 3, lines 11-20.)

While the traffic control approach of *Ellesson* does involve “performance monitoring,” *Ellesson* describes this aspect of the disclosed traffic control approach as merely including “estimating the bandwidth, delay and lost characteristics of selected flows. This function will be realized either using additional probe packets or using header fields if data packets are encapsulated before entering the backbones network. The frequency of probing is adjusted according to the SLA terms while maintaining a tight control over the overhead introduced by such additional traffic. The latter is achieved by ensuring that the overhead of probing does not exceed a certain percentage of the actual data traffic which is monitored by the statistics collection function.” (Col. 6, lines 3-13.)

(3) THE OFFICE ACTION’S CITATIONS FROM *ELLESSION*

The Office Action states that *Ellesson* discloses “receiving information defining a particular service level agreement, wherein said information defines one or more tests for monitoring the level of service that has been offered to the customer (See col. 6, lines 3-10)...” However, the cited portion of *Ellesson* merely describes performance monitoring, which as discussed above may involve the use of probe packets or header fields that may be considered to be tests. There is nothing in this cited portion of *Ellesson* or elsewhere that describes the probe packets or the header fields being defined in the same information that defines a service level agreement.

In contrast to the cited portion of *Ellesson*, Claim 1 features “receiving information defining a particular service level agreement” and that “said information defines one or more tests for monitoring the level of service.” Therefore, in Claim 1, the information that defines the SLA also defines the tests for level of service monitoring. The Office Action fails to cite any portion of *Ellesson* that discloses “information” as featured in Claim 1 that serves the functions of both “defining the service level agreement” and that “defines one or more tests for monitoring the level of service” as featured in Claim 1.

Thus, the Applicant respectfully submits that *Ellesson* does not disclose, teach, suggest, or in any way render obvious “receiving information defining a particular service

level agreement, wherein said information defines one or more tests for monitoring the level of service that has been offered to the customer,” as featured in Claim 1.

Furthermore, the Office Action states that *Ellesson* discloses “creating a schema that provides a set of rules for defining service level agreements (See col. 2, lines 58-60).” However, the cited portion of *Ellesson* states “The schemes that make the network predictable provide mechanisms that can estimate the responsiveness of an IP network, and thereby assist in implementing service level agreements.” (Col. 2, lines 57-60.) The use of the word “schemes” in the cited portion of *Ellesson* is used in the context of referring to the “approaches” or “plans” as described in *Ellesson*, and thus *Ellesson* is not using the word “schemes” to refer to a “schema.”

In Claim 1, the schema is expressly described as providing “a set of rules for defining service level agreements,” but nothing in the cited portion of *Ellesson* or elsewhere can be reasonably construed as disclosing a set of rules, little less a “schema that provides a set of rules for defining service level agreements,” and even less “creating” such a schema as featured in Claim 1. Thus, the Applicant respectfully submits that *Ellesson* does not disclose, teach, suggest, or in any way render obvious “creating a schema that provides a set of rules for defining service level agreements,” as featured in Claim 1.

In addition, the Office Action states that *Ellesson* discloses “verifying that the information defining said particular service level agreement conforms to the set of rules in said schema (See col. 3 lines 66-67 and col. 4, lines 1-2).” However, the cited portion of *Ellesson* states “In such an environment, edge devices play the role of adapting the traffic entering the backbone network to the specific capabilities provided by the network in order to ensure that the SLA conditions are met efficiently.” (Col. 3, line 65 through Col. 4, line 2.) Thus, *Ellesson* is describing that edge devices adapt traffic to the network capabilities to ensure efficient compliance with an SLA, which is part of the traffic control approach being described in *Ellesson*.

However, this cited portion of *Ellesson* describes nothing that could possibly be construed as being related to any kind of a “verifying” function as featured in Claim 1, little less “verifying that the information defining the service level agreement conforms to the set of rules in said schema.” There is nothing in this cited portion of *Ellesson* that refers to anything like a schema, little less “a schema that provides rules for defining service level agreements.”

Even if one were to accept for argument's sake that the prior reference to "schemes" in *Ellesson* did disclose a schema as featured in Claim 1, there is nothing in this later cited portion of *Ellesson* that describes verifying that information that defines SLAs conforms to rules in those "schemes."

Thus, the Applicant respectfully submits that *Ellesson* does not disclose, teach, suggest, or in any way render obvious "verifying that the information defining said particular service level agreement conforms to the set of rules in said schema," as featured in Claim 1.

(4) CONCLUSION OF DISCUSSION OF CLAIM 1 AND *ELLESSION*

Because *Ellesson* fails to disclose, teach, suggest, or in any way render obvious:

(1) "creating a ***schema*** that provides a set of rules for defining service level agreements," (2) receiving **information** defining the service level agreement, wherein said **information** defines one or more tests for monitoring the level of service that has been offered to the customer," or (3) "verifying that the information defining the service level agreement conforms to the set of rules in said ***schema***," the Applicant respectfully submits that, for at least the reasons stated above, Claim 1 is allowable over the art of record and is in condition for allowance.

B. CLAIMS 6, 10, AND 11

Claims 6, 10, and 11 contain features that are the same as those described above with respect to Claim 1, and in particular all feature (1) "creating a ***schema*** that provides a set of rules for defining service level agreements," (2) receiving **information** defining the service level agreement, wherein said **information** defines one or more tests for monitoring the level of service that has been offered to the customer," and (3) "verifying that the information defining the service level agreement conforms to the set of rules in said ***schema***" as featured in Claim 1. Therefore, based on at least the reasons stated above with respect to Claim 1, the Applicant respectfully submits that Claims 6, 10, and 11 are allowable over the art of record and are in condition for allowance.

C. CLAIMS 12, 15, 18, 21, AND 24

Claims 12, 15, 18, 21, and 24 contain features that are the same as or similar to those described above with respect to Claim 1. In particular Claims 12, 15, 18, and 21 feature “**receiving information defining the service level agreement, wherein said information defines one or more tests for monitoring the level of service** that has been offered to the customer” as in Claim 1. Similarly, Claim 24 features “receiving a service level agreement definition that defines one or more tests for monitoring the level of service that is being provided to the customer,” which is similar to Claim 1. Therefore, based on at least the reasons stated above with respect to Claim 1, the Applicant respectfully submits that Claims 12, 15, 18, 21, and 24 are allowable over the art of record and are in condition for allowance.

In addition, in regards to Claims 12, 15, 18, and 21, the Office Action states that *Bartz* discloses “distributing the one or more tests to one or more agents that are configured to communicate with devices that are associated with the network...(See col. 4, lines 48-67). However, the cited portion of *Bartz* merely explains how the “Firehunter monitoring and measuring tools utilize agents to gather measurements associated with the performance, availability and other quality levels of services being provided to customers. Each agent is comprised of (1) tests that determine which measurements the agents should take, and (2) an agent controller that determines which tests the agents are to run, how frequently the agents are to run those tests and where the agents are to send the collected measurements data.” (Col. 4, lines 47-55). The cited portion of *Bartz* continues on to describe two types of agents, one for taking active measurements and one for taking passive measurements. (Col. 4, lines 55-65.) Finally, *Bartz* concludes the cited portion by noting that as “an agent collects measurement samples, it sends them to the DMS 1 [diagnostic/measurement server] at intervals defined by the service model.” (Col. 4, lines 65-67.)

While the cited portion of *Bartz* discusses the use of agents to run tests to get measurements on quality levels of service, there is nothing in the cited portion of *Bartz* relating to “***distributing*** the one or more tests to one or more agents” as featured in Claims 12, 15, 18, and 21, little less that the tests being distributed to the agents are defined in the same information that defines the service level agreement, as also featured in Claims 12, 15, 18, and 21 and as discussed above with respect to Claim 1. Thus, the Applicant respectfully submits that *Bartz* does not disclose, teach, suggest, or in any way render obvious

“distributing the one or more tests to one or more agents that are configured to communicate with devices that are associated with the network,” as featured in Claims 12, 15, 18, and 21.

Therefore, based on at least the reasons stated above and those previously stated above with respect to Claim 1, the Applicant respectfully submits that Claims 12, 15, 18, 21, and 24 are allowable over the art of record and are in condition for allowance.

Also, this discussion of “distributing the one or more tests” as featured in Claims 12, 15, 18, and 21 also applies equally to Claims 2, 7, 26, and 30 that also feature “distributing the one or more tests to one or more agents...” and which were also rejected in the Office Action based on the same cited portion of *Bartz*. Therefore, based on at least the reasons stated above with respect to Claims 12, 15, 18, and 21, and those previously stated above with respect to Claim 1, the Applicant respectfully submits that Claims 2, 7, 26, and 30 are allowable over the art of record and are in condition for allowance.

#### D. CLAIM 22

Similar to Claim 1, Claim 22 features “receiving through a standardized open interface metric parameter information that defines one or more metric tests that are to be used to verify that the customer is receiving the level of service that has been guaranteed by the service provided.” Thus, for at least the reasons stated above with respect to Claim 1, Claim 22 is allowable over *Ellesson*.

In addition, in the rejection of Claim 22, the Office Action states that *Carley* discloses “receiving through a standardized open interface metric parameter information that defines one or more metric tests that are to be used to verify that the customer is receiving the level of service (See col. 64, lines 8-11).” However, the cited portion of *Carley* merely states “Metrics are an important part of quality management in that they provide a method of measuring (for example, sampling testing, and determining) whether a process or product meets a given criterion.” (Col. 64, lines 8-11.) *Carley* continues to explain that “Measurement tools are used to measure process quality and product quality. Process quality may include Metrics such as the time it takes to process a change request. Product quality should be measured for all the product expectations the project has set. This measurement process is the inspection part of quality management.” (Col. 64, lines 16-21; emphasis added.) As indicated by the highlighted



portion, in *Carley* a “Metric” is a measured quantity, such as the time it takes to process a change request.

In contrast to *Carley*, Claim 22 features “metric parameter information that defines one or more metric tests.” Nothing in the cited portion of *Carley* or elsewhere discloses a definition of a metric test, little less metric parameter information. Furthermore, Claim 22 features “**receiving through a standardized open interface metric parameter information,**” and nothing in the cited portion of *Carley* or elsewhere can be construed as disclosing such a receiving function of metric parameter information, little less that such receiving occurs “through a standardized open interface” as featured in Claim 22.

Thus, the Applicant respectfully submits that *Carley* does not disclose, teach, suggest, or in any way render obvious “receiving through a standardized open interface metric parameter information that defines one or more metric tests that are to be used to verify that the customer is receiving the level of service,” as featured in Claim 22.

Therefore, based on at least the reasons stated above with respect to Claim 22 and those previously stated above with respect to Claim 1, the Applicant respectfully submits that Claim 22 is allowable over the art of record and are in condition for allowance.

E. CLAIMS 4, 9, 14, 17, 20, 28, 32, AND 35

Claims 4, 9, 14, 17, 20, 28, 32, and 35 all feature “**communicating the interface data to a client** that is remote from said server, wherein **the interface data allows users to define tests for monitoring the level of service** that is being provided by the service provider.” The Office Action states that *Ellesson* discloses “communicating the interface data to a client that is remote from said server, wherein the interface data allows users to define tests for monitoring the level of service that is being provided by the service provider (See col. 7, lines 57-64).

However, the cited portion of *Ellesson* explains that the “Interface category 22 identifies an interface through which a customer may send its traffic. The access to an interface might be via dial-up lines or via a directory connected network. An interface is identified through its IP address, and has a default service level which is assigned to its owners. It also contains the name of the owner and the physical machine on which it is

installed. An interface entry also contains the time when it was last updated.” (Col. 7, lines 57-64.)

Thus, the cited portion of *Ellesson* merely describes an “interface entry” such as interface category 22 that identifies the interface through which a customer can send its traffic and the characteristics of the interface (e.g., its IP address) and the information contained in the interface entry (e.g., when it was last updated). However, there is nothing in this portion of *Ellesson* or elsewhere that discloses “**communicating the interface data to a client** that is remote from said server,” nor that “the interface data **allows users to define tests for monitoring the level of service**” as featured in Claims 4, 9, 14, 17, 20, 28, 32, and 35.

Thus, the Applicant respectfully submits that *Ellesson* does not disclose, teach, suggest, or in any way render obvious “**communicating the interface data to a client** that is remote from said server, wherein **the interface data allows users to define tests for monitoring the level of service** that is being provided by the service provider,” as featured in Claims 4, 9, 14, 17, 20, 28, 32, and 35.

Therefore, based on at least the reasons stated above with respect to Claims 4, 9, 14, 17, 20, 28, 32, and 35 and those previously stated above with respect to Claim 1, the Applicant respectfully submits that Claims 4, 9, 14, 17, 20, 28, 32, and 35 are allowable over the art of record and are in condition for allowance.

F. CLAIMS 2-5, 7-9, 13-14, 16-17, 19-20, 23, AND 26-35

Claims 2-5 are dependent on Claim 1, Claims 7-9 and 25 are dependent on Claim 6, Claims 13-14 are dependent on Claim 12, Claims 16-17 are dependent on Claim 15, Claims 19-20 are dependent on Claim 18, Claim 23 is dependent on Claim 22, Claims 26-29 are dependent on Claim 10, Claims 30-33 are dependent on Claim 11, and Claims 34-35 are dependent on Claim 21, thus include each and every feature of the corresponding independent claims. Each of Claims 2-5, 7-9, 13-14, 16-17, 19-20, 23, and 26-35 is therefore allowable for the reasons given above for Claims 1, 6, 10-12, 15, 18, and 21-22. In addition, each of Claims 2-5, 7-9, 13-14, 16-17, 19-20, 23, and 26-35 introduces one or more additional limitations that independently render it patentable, several of which have been discussed above. However, due to the fundamental differences already identified, to expedite the positive resolution of this case, a separate discussion of any further additional limitations of

Claims 2-5, 7-9, 13-14, 16-17, 19-20, 23, and 26-35 is not included at this time. Therefore, it is respectfully submitted that Claims 2-5, 7-9, 13-14, 16-17, 19-20, 23, and 26-35 are allowable for the reasons given above with respect to Claims 1, 6, 10-12, 15, 18, and 21-22.

## CONCLUSION

The Applicant believes that all issues raised in the Office Action have been addressed and that allowance of the pending claims is appropriate. After entry of the amendments, further examination on the merits is respectfully requested.

The Examiner is respectfully requested to contact the undersigned by telephone if it is believed that such contact would further the examination of the present application.

For the reasons set forth above, it is respectfully submitted that all of the pending claims are now in condition for allowance. Therefore, the issuance of a formal Notice of Allowance is believed next in order, and that action is most earnestly solicited.


To the extent necessary to make this reply timely filed, the Applicant petitions for an extension of time under 37 C.F.R. § 1.136.

If any applicable fee is missing or insufficient, throughout the pendency of this application, the Commissioner is hereby authorized to any applicable fees and to credit any overpayments to our Deposit Account No. 50-1302.

Respectfully submitted,

HICKMAN PALERMO TRUONG & BECKER LLP

Dated: June 22, 2004

  
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### CERTIFICATE OF MAILING

I hereby certify that this correspondence is being deposited with the United States Postal Service as first class mail in an envelope addressed to: Hon. Commissioner for Patents, Mail Stop AMENDMENT P.O. Box 1450, Alexandria, VA 22313-1450.

on June 22, 2004

by 